

Revised by Marshall Griffin, August 15, 2003

**WEST VIRGINIA UNIVERSITY AT PARKERSBURG
UNIFORM COURSE SYLLABUS**

Name of Course: **Microbiology for Surgical Technicians** Course No. **Biology 110**

Department: **Biology**

Division: **Natural Sciences/Mathematics**

I. Course Objectives

At the completion of the lecture component of the Microbiology course, the student will be able to:

1. Recognize important historical events in microbiology.
2. Compare the basic cell structure of prokaryotic and eucaryotic cells.
3. Explain basic concepts of bacterial nutrition and growth.
4. Understand method of control of bacterial populations and infections.
5. Explain the germ theory of disease.
6. Recognize the normal microbial flora of the body.
7. Understand host-parasite relationships.
8. Describe non-specific host defense mechanisms.
9. Understand basic principles of immunity.
10. Characterize immunologic disorders.
11. Understand basic principles of epidemiology.
12. Describe microbial disease processes involving the skin and eye.
13. Describe microbial disease processes involving the central nervous system.
14. Describe microbial disease processes involving the nervous system.
15. Describe microbial disease processes involving the cardiovascular and lymphatic systems.
16. Describe microbial disease processes involving the respiratory system.
17. Describe microbial disease processes involving the digestive system.
18. Describe microbial disease processes involving the urinary system and the reproductive system.

II. Topics to Be Studied

1. History of Microbiology
2. Prokaryotic and eucaryotic cell structure.
3. Basic biochemistry and microbial metabolism
4. Microbial growth
5. Methods of control of microbial growth (sterilization and disinfection)
6. Normal and transient flora of the human body
7. Host-parasite relationships
8. Mechanisms of pathogenicity
9. Principles of epidemiology

10. Principles of disease control
11. Non-specific host defense mechanisms
12. Principles of immunity and immune disorders
13. Infectious diseases of the skin
14. Infectious diseases of the oral cavity and respiratory tract
15. Infectious diseases of the gastrointestinal tract
16. Infectious diseases of the circulatory system and lymphatic system
17. Infectious diseases of the nervous system
18. Infectious diseases of the urogenital tract

III. Special Projects to Be Included in Course

Research papers

Reports

Surveys

Annotated bibliographies

Other

Infectious Disease Reports

Students will be assigned to disease report groups. Each group of 3-4 students will collaborate to prepare a report on assigned sets of infectious diseases. The assigned disease topics will be presented in an oral report format along with a written outline of the topics. Topics and additional instructions will be distributed in a separate handout.

IV. Methods of Student Evaluation

Tests (how many? how often? what type?)

Quizzes

Oral Presentations

Written Papers

Laboratory Activities

Clinical Experiences

Quizzes

Short, announced, unannounced, or take home quizzes may be given at any time during any lecture session. It is anticipated that there will be between five and ten quizzes given during the term. Quizzes cannot be made up; therefore, the lowest quiz score will be dropped at the end of the semester before the quiz score average is calculated.

Examinations

There will be a total of four announced, written examinations including the comprehensive final examination at the end of the semester. Examinations will use a combination of multiple choice, matching, and short answer items. A missed examination must be made-up by appointment. Only under the most extenuating circumstances will a student be permitted to make-up more than one examination. If a student fails to make-up an examination, a 0% score will be recorded

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for that examination. Make-up examinations will likely be different from the regularly scheduled examination.

Infectious Disease Reports

The infectious disease reports will be assigned a score based on the depth and quality of the research as well as the quality of the written and oral presentations.

Final Course Average

The Microbiology course final average will be calculated on the following basis:

Lecture average	= 65%
Infectious disease reports	= 10%
<u>Laboratory average</u>	<u>= 25%</u>

FINAL AVERAGE = 100%

V. Assessment of Outcomes

**What measurements will be used to demonstrate that outcomes have been reached?
(Refers to class as a whole, not individual students.)**

Students will be asked to complete a course and instructor evaluation form at the end of the semester. Faculty who teach the course, the Surgical Technician Program faculty, and members of the Surgical Technology Program Advisory Committee will confer to determine what modifications are needed before the course is subsequently offered.

VI. Other Information

What additional information will help to clarify the course?

Prerequisite: Biology 109 (Surgical Technology Anatomy and Physiology) and admission to the Surgical Technician Program, or consent of the course instructor.

Co-requisite: Concurrent enrollment in Biology 110L (Microbiology for Surgical Technicians) laboratory